

INCH-POUND

MIL-DTL-83505/1F
w/Amendment 1
25 April 2022
SUPERSEDING
MIL-DTL-83505/1F
17 May 2004

DETAIL SPECIFICATION SHEET

SOCKETS (LEAD, ELECTRONIC COMPONENTS) (TYPE I, SOLDERLESS WRAP)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the MIL-DTL-83505.

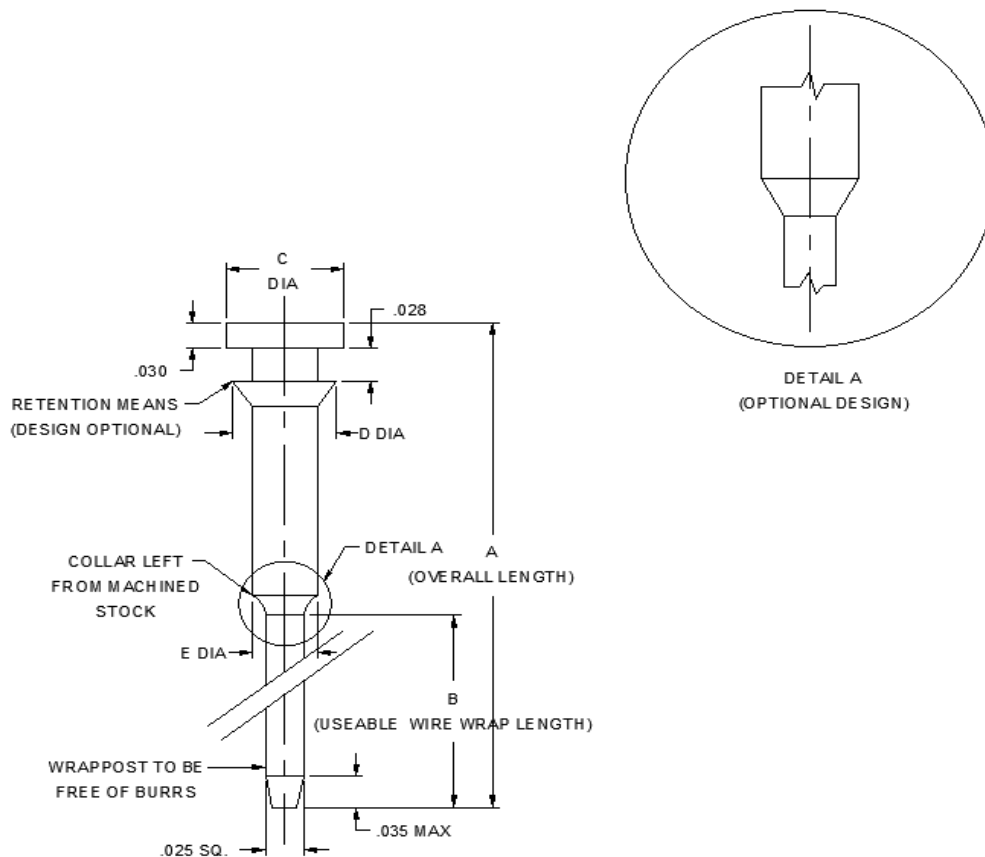


FIGURE 1. Socket, lead, (type I) solderless wrap.



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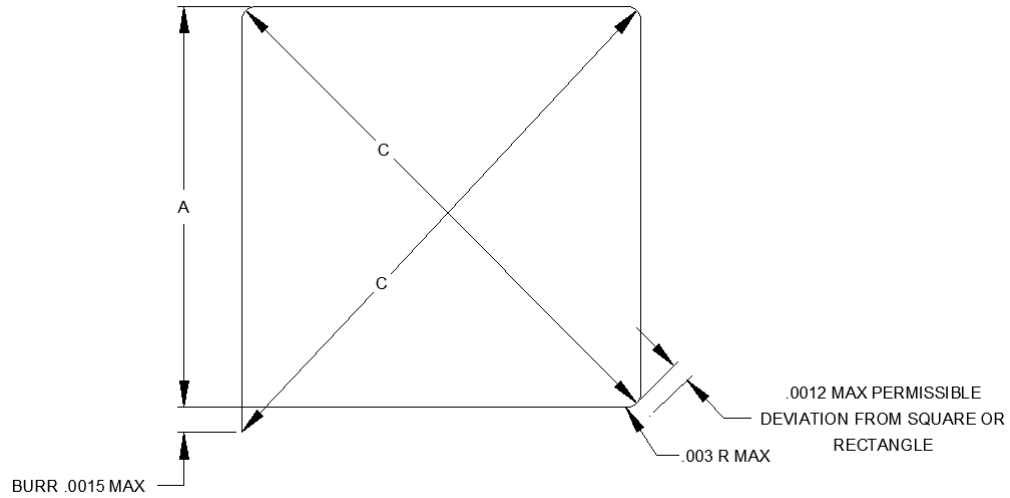
Dash number	A ".010 (0.25)	B ".010 (0.25)	C Dia	D Dia ".002 (0.05)	E Dia
-001	.703	.475	.072	.060	.052
-002	(17.86)	(12.07)	(1.83)	(1.52)	(1.32)
-003	.563	.335	.072	.060	.052
-004	(14.30)	(8.51)	(1.83)	(1.52)	(1.32)
-005	.453	.225	.072	.060	.052
-006	(11.51)	(5.72)	(1.83)	(1.52)	(1.32)
-007	.812	.475	.085	.082	.073
-008	(20.62)	(12.07)	(2.16)	(2.08)	(1.85)
-009	.703	.475	.063 ± .003	.060	.052
-010	(17.86)	(12.07)	(1.60 "0.08)	(1.52)	(1.32)
-011	.563	.335	.063 ± .003	.060	.052
-012	(14.30)	(8.51)	(1.60 "0.08)	(1.52)	(1.32)
-013	.453	.225	.063 ± .003	.060	.052
-014	(11.51)	(5.72)	(1.60 "0.08)	(1.52)	(1.32)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance for three place decimals is ± .005 inch (0.13 mm).
4. Part is to be free of burrs, except as noted.
5. Dimensions apply after plating.

FIGURE 1. Socket, lead, (type I) solderless wrap – Continued.

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Inches	mm
.0012	0.030
.0015	0.038
.003	0.076

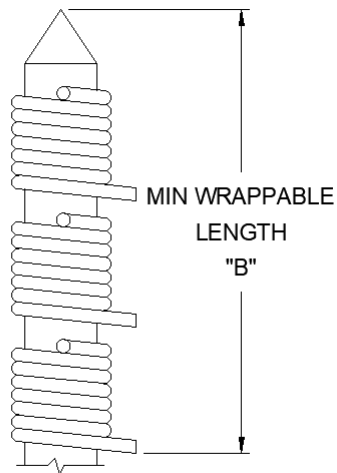
A (mm)	B (mm)	C (mm)	Parallelism (mm)	Straightness Inch/inch (mm)
.025 (0.64) nominal	.025 (0.64) nominal	.0355 (0.902) max	.002	.005
.022 (0.56) min	.022 (0.56) min	.0325 (0.826) min	(0.05)	(0.13)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.

FIGURE 2. Wrappost geometry.

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MINIMUM WRAPPABLE LENGTH, -B, INCHES

(see note 5)

Number of Wrapped connections	Wire gauge (AWG)						
	30	28	26	24	22	20	18
1	.185 (4.70)	.219 (5.56)	.226 (5.74)	.258 (6.55)	.303 (7.70)	.327 (8.31)	.391 (9.93)
2	.320 (8.13)	.388 (9.86)	.402 (10.21)	.466 (11.84)			
3	.455 (11.56)						

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Unless otherwise specified the tolerance is $\pm .005$ inch (0.13 mm).
5. Minimum wrappable length shall have the wrap post geometry in accordance with figure 2.

FIGURE 3. Wrappost configurations and wire gauge wrappable length.

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REQUIREMENTS

Qualification: Not required.

First article testing: First article testing shall be in accordance with table II and group A inspection of MIL-DTL-83505.

Group first article testing: Shall be as specified in table I.

Dimensions and configuration: Shall be in accordance with figures 1, 2, and table II.

Solderless wrap post geometry: The solderless wrap post geometry shall be in accordance with figures 2 and 3.

TABLE I. Group qualification.

Dash number	Qualification tests
-001, -002, -009, and -010 (as applicable)	Require all first article tests, table II, and group A inspection of MIL-DTL-83505.
-003 through -006 and -011 through -014 (as applicable)	Visual and mechanical tests of MIL-DTL-83505 and first article tests of one of the following: -001, -002, -009, -010.
-007 and -008 (as applicable)	Groups 1, 2, and 5 of first article tests, table II, and group A inspection of MIL-DTL-83505 and first article testing of one of the following: -001, -002, -009, or -010.

TABLE II. Interface dimensions and finish.

Dash number	Recommended mounting hole dia (mm) ".001 (0.03)	Accepts pin		Sleeve plating
		Length (mm)	Diameter (mm)	
-001 and -009	.055 (1.40)	.175 (4.45)	.021 (0.53)	Gold
-002 and -010		.125 (3.18)	.016 (0.41)	Tin/lead
-003 and -011	.055 (1.40)	.175 (4.45)	.021 (0.53)	Gold
-004 and -012		.125 (3.18)	.016 (0.41)	Tin/lead
-005 and -013	.055 (1.40)	.175 (4.45)	.021 (0.53)	Gold
-006 and -014		.125 (3.18)	.016 (0.41)	Tin/lead
-007	.076 (1.93)	.281 (7.14)	.030 (0.76)	Gold
-008		.156 (3.96)	.020 (0.51)	Tin/lead

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Engagement (mating) and separation (unmating) forces shall be in accordance with MIL-DTL-83505 except as specified in table III.

TABLE III. Engagement (mating) force.

Dash numbers	Test gauge B (mm)	Mating force max lbs (kg)
-001 and -009	.125	1.25
-002 and -010	(3.18)	(31.8)
-003 and -011	.125	1.25
-004 and -012	(3.18)	(31.8)
-005 and -013	.125	1.25
-006 and -014	(3.18)	(31.8)
-007 and -008	.156	4.00
	(3.96)	(101.6)

Terminals: Type I (solderless wrap).

Mounting: Use .046 inch (1.16 mm) minimum thickness mounting board.

Test mounting:

Use glass epoxy board, type G10 or FR4 material for mounting sockets.

Part or Identifying Number (PIN): The PIN shall consist of the basic number of this specification sheet and the dash number from table II.

M83505/1- 001
 └─ Dash number
 └─ Basic document number

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

CONCLUDING MATERIAL

Custodians:
Navy – EC
Army – CR
Air Force – 85
DLA – CC

Preparing activity:
DLA – CC

(Project 5935-2022-071)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.